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HOME

NEWS

by Region

by Commodity

by Company

by Issue

by Market Trend

PUBLICATIONS

LINKS

ABOUT TMN

Search:

[Search Help](#)

Go

What Lies Beneath

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The Denver Westword

Excerpts from a very lengthy article

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By Alan Prendergast

Todd Hennis is not the sort of man to underestimate the dangers of wandering solo through an abandoned mine. The first time he went into the Mogul, a once-thriving gold mine high in the San Juans above Silverton, he took a professional crew from Utah with him to do an environmental reconnaissance.

A Harvard graduate in economics, Hennis purchased the Mogul by paying off its back taxes. It's one of a string of extensively worked mines in the famous Eureka District, which produced a fortune in gold a century ago. The Mogul had last been a going concern in 1965, but Hennis estimated that the mine still had four million tons of ore left in it.

"I never planned to operate the Mogul myself," he says now. "I wasn't that stupid. I wanted to put together the geologic information, prove up the reserves and have a responsible company come in and take it over."

Before his first foray into the mine, Hennis spent weeks clearing loose rock from the entrance by hand and shoring up timbers. His recon crew found a clear passage that extended several hundred feet into the mine, past a point where a modest flow of water came down the walls -- probably infiltration from a stream above. "The last 300 feet of the main drift was bone dry," Hennis recalls.

His second visit was prompted by an alarming call from state regulators, who informed him that the Mogul was discharging 165 gallons per minute of metals-laced water, making it one of the largest sources of mine pollution in the entire Upper Animas River watershed. Hennis was stunned: A rate of 165 GPM was more than five times the flow he'd found a few years earlier. In late summer 2001, accompanied by a state geologist, he went back to the mine to investigate.

"It was like wading through molasses," he says. "Up ahead it sounded like Niagara Falls. I went in another 300 feet, and water was flowing from overhead, pouring down. We're talking about a torrent."

Where was the water coming from? Hennis had his suspicions, and his investigation plunged him into a long-running battle with neighboring mine owners, state health and mining officials, and the Environmental Protection Agency. The fight has cost him thousands of dollars in legal fees and his dream of reviving the Mogul.

At the heart of the dispute is a deal hammered out a decade ago between the Sunnyside Gold Corporation and the state's Water Quality Control Division (WQCD), part of the Colorado Department of Public Health and Environment, to settle a Denver court case. At one point the largest employer in San Juan County, Sunnyside stopped mining in 1991 and then spent millions cleaning up its site and treating the toxic water that flowed from its mine. The court settlement allowed the company to seal up the mine, installing bulkheads at the portals and flooding its workings, in exchange for undertaking other projects to improve water quality in the Animas basin.

Water discharges from several other mines in the area increased significantly after Sunnyside bulkheaded its mine. Various parties have advanced different theories about the reasons for the increased flow, and no one has ever established that Sunnyside's own

mine pool is the culprit, possibly seeping into other mines through manmade connections or natural fissures. Still, in 2002, Sunnyside agreed to take on additional cleanup costs as part of its exit strategy, including paying for sealing off the Mogul. At the same time, the company was allowed to transfer its discharge permit to a smaller operator, which has struggled to meet its obligations to treat the remaining flow from the now-bulkheaded American Tunnel, one of the primary drainage points from the Sunnyside mine.

Last year, after a series of financial and legal setbacks, the water-treatment plant at the American Tunnel was shut down. Since last fall, acidic, zinc-laden water from the American Tunnel has flowed untreated into Cement Creek, which joins up with the Animas River at Silverton. (The Animas, which supports a trophy brown trout fishery, heads south through Durango and joins the San Juan River in New Mexico.)

Regulators say the discharge accounts for only 5 percent of the mine pollution pouring into Cement Creek, a highly mineralized stream that winds past scores of abandoned mines in the district. They insist that, whatever problems remain, the Sunnyside deal has had a positive impact on water quality in the Upper Animas watershed.

"Protracted" negotiations with Sunnyside produced the best possible settlement, Johnson says. She defends the state's decision not to oppose the release of a \$5 million bond to Sunnyside, on the grounds that it had demonstrably improved water quality at a testing point on the Animas below Silverton.

Hennis isn't so sure. In his view, Sunnyside got off cheaply, and a mile-wide loophole in the law allowed a major foreign corporation -- Sunnyside's parent company was acquired two years ago by Canadian mining giant Kinross Gold -- to walk away from its long-term obligations, leaving a local "straw operator" to take the fall. The entire episode, he says, has been an exercise in regulatory inertia, as well as a lesson in the perplexing hydrological questions that bedevil mine cleanup efforts.

There are roughly half a million abandoned mine sites across the western United States, including more than 23,000 in Colorado. The state doesn't have the resources to monitor the mines, and the extent of the water pollution caused by them is impossible to gauge. Some may represent only minor disturbances in the way groundwater deals with local minerals, but others have clearly caused major disruptions, exposing waterways to runoff from a highly acidic brew of tailings, mine dumps and metal ore.

Discovered in 1873, the Sunnyside was one of the earliest and richest strikes in southwestern Colorado, and it endured longer than most. Besides gold, the mine produced silver, lead, copper and zinc with few interruptions until the Depression, then came back online with new technology in the latter half of the twentieth century. But tougher environmental laws and a few blunders of a hydrological nature made the Sunnyside an increasingly costly proposition.

In 1973, melting snowpack caused a breach in a tailings pond, sending thousands of tons of tailings into the Animas watershed. In 1978, a crew exploring a promising vein of gold drilled a borehole too close to the ancient glacial waters sitting on top of the mine. Lake Emma burst into the mine, flooding the workings with water and a million tons of mud, and pummeling a twenty-ton locomotive into scrap. The American Tunnel turned into a geyser, spouting water more than a hundred feet into the air. All that was left of Lake Emma was a crater the length of three football fields. Fortunately, no one was killed; the lake broke through on a Sunday afternoon, when mine crews were at home.

Standard Metals, Sunnyside's operator at the time, never recovered from the multimillion-dollar cleanup bill. In 1985, Echo Bay, a Canadian mining company, took over the mine for \$20 million. Six years later, Sunnyside was shut down for good.

The mine closure had a devastating effect on San Juan County, the least populous county in the state. "We lost half our population," recalls Beverly Rich, the county treasurer and chairwoman of the San Juan County Historical Society. "We went from about 200 children to 43 kids in our school. We lost one-third of our county tax revenue. We lost a lot of our volunteer firemen -- and good-paying jobs. Mining pays well, and tourism jobs don't quite cut the mustard."

Bitten by the mining bug, Hennis moved to Grand Junction and began making trips to Silverton, exploring the local history and assessing the aftermath of the Sunnyside shutdown. "Everybody thought Silverton was going to dry up and blow away," he says.

"You could buy a house for \$25,000."

Defunct mines in the area were available for a price that amounted to clearing the tax liens. Hennis saw an opportunity in the Mogul, a much smaller mine than the Sunnyside, but large by local standards, with 20,000 feet of workings and much untapped ore. He began making inquiries.

Sunnyside
PRPD
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Hennis had barely started in the business when he learned of the increased discharge coming out of the Mogul. Under pressure from state regulators to fix the problem, he began to look into the possibility that the new flow was coming from the mine pool that had been created by sealing the Sunnyside. Official maps of the mining operations showed that the underground workings of the two mines were connected at one level. Analysis of the new flow showed that it contained a high amount of fluorine, and a United States Geological Survey official told Hennis that the most likely source for the distinctive fluorine "tag" was the mine pool itself.

Even more persuasive, in his view, were the documents that Hennis came across as he traced the history of the settlement agreement between the state and Sunnyside. One 1995 memo to WQCD officials, which Hennis calls the "smoking gun," lays out Sunnyside's calculations of the risks involved in plugging its mine:

"Limited quantities of water may escape through the Brenneman Vein after filling the mine pool. The mitigation proposed for this settlement is intended to mitigate effects of this eventuality, if it should occur."

The Brenneman Vein was a direct path from the Sunnyside to the Mogul. A Sunnyside consultant's modeling of possible results predicted that if the mine pool found a "preferential path" along that course, it would discharge from the Mogul at a rate of 160 gallons per minute within months of the bulkheading. And that, Hennis claims, is precisely what happened. "They hit the mark on this perfectly," he says.

State regulators have taken no official position on the origin of the increased flows at the Mogul and other mines in the area; cases of alleged "water trespass" are a civil matter, they note. But they also say they anticipated that the creation of the mine pool would alter the hydrology of the mountain. "When you put the plug back in, you're trying to re-establish that groundwater regime, so springs and seeps that might have been drained start flowing again," says Bruce Humphries, minerals program supervisor for the Division of Minerals and Geology. "That's expected."

Also skeptical of Hennis's claims are members of the Animas River Stakeholders Group, a coalition of local, state and federal agencies, mining companies and others interested in protecting and improving the watershed. "After the Sunnyside bulkheads were put in, both the Mogul and the Gold King mines started discharging more water," notes Bill Simon, the group's coordinator. "But it would be silly to say that's from the mine pool. We don't know that."

Sunnyside Gold is a member of the stakeholders' group, and Simon says the company has been "a great cooperator in the basin with respect to environmental cleanup." But he also acknowledges that other stakeholders had concerns about many aspects of the deal that the company reached with the state -- including Sunnyside's assurances that bulkheading would eliminate the flow from the American Tunnel. His group has been involved in sealing other mines, Simon says, and there's always some seepage from fractures around the sealed portals.

Sunnyside
mine →

In 2002, shortly after finding the "smoking gun" memo, Hennis decided to sue Sunnyside Gold in San Juan County. "One day after we filed the lawsuit, their lawyer called my lawyer," he says. "This was after stalling us for close to a year, saying this was a totally natural phenomenon, blah, blah, blah. He said, 'We can settle this.'"

(The deal Sunnyside offered wasn't quite what Hennis had hoped for. But he thought about the hundreds of thousands of dollars it would take to go to trial and try to prove that Sunnyside was responsible for the toxic water invading the Mogul. He thought about a man he knew who'd been handed a million-dollar check for his mine back in the crazy Eighties and turned it down, and later ended up changing sheets in Telluride for six bucks an hour when the mine went sour on him.

Hennis took the deal.

The deal was a complicated three-way swap between Sunnyside, Hennis's San Juan Corporation and another local operator, Gold King Mines. Hennis gave up his mine, and Sunnyside agreed to pay \$500,000 to bulkhead the Mogul and another mine, the Koehler. In return, Hennis received title to property Sunnyside owned near the American Tunnel, including part of the ghost town of Gladstone. Gold King took over title to the Mogul and was paid by Sunnyside to do the bulkheading.

Hennis says he received no cash in the deal, just a \$199,000 note on the Mogul. And there was a crucial catch: He was required to lease back to Gold King the four settling ponds on the land that his company had received. The ponds were an essential component of the water-treatment plant next door, which Gold King was taking over from Sunnyside. In effect, Sunnyside was ridding itself of the requirement to treat the water still flowing out of the American Tunnel by transferring its discharge permit to Gold King, along with \$172,000 in "startup funds."

Gold King president Steve Fearn is a longtime Silverton resident with an engineering background; he's also been active in local economic development plans and has sought to bring mining back to the county. Fearn, who took over the Gold King mine six years ago, says the deal with Sunnyside brought him closer to reviving an operation that hasn't been in commercial production since 1925; the deal allowed him to pipe Gold King's discharge to the American Tunnel for treatment.

One local describes Fearn as a "dreamer." Others regard him as more of a promoter than a mine operator, without the kind of backing needed to sustain a full-scale mining venture. Hennis says he had his own reservations about Fearn's ability to take over Sunnyside's water-treatment requirements. But the state didn't object to the move, and in early 2003 Sunnyside handed its water-discharge permit to Gold King. Within a few weeks, Sunnyside had reclaimed its \$5 million bond and been declared in full compliance with its obligations under the court settlement.

WQCD's Johnson says her division has little recourse under the law to prevent such a permit transfer, even if the new operator offers nothing in the way of a track record or financial guarantees. "Unfortunately, we don't have a means test," she says. "We ask a lot of questions and explain about the liabilities. But we don't have the authority to refuse on the basis that we just think it's going to be a bad risk. In this case, it looked like it was going to be a go."

But disputes arose among the parties almost from the start. Hennis demanded that Fearn produce proof of liability insurance as part of the deal to lease back the ponds to the treatment-plant operation; when the proof wasn't forthcoming, Hennis went to court seeking to evict Gold King from his property. "I can't have that site uninsured," Hennis says. "It's endless liability."

Gold King eventually produced proof of insurance, forestalling the eviction. But the company also ran afoul of the state for failing to keep current on its bonding obligations. The Division of Minerals and Geology has since assessed \$11,000 in civil penalties against the company and revoked its reclamation permit, essentially barring any active mining on the property.

Fearn has several explanations for the spotty performance. An avalanche hindered access to the plant and took the operation down for several weeks one winter, he says, and problems with the aging equipment at the plant, the changing chemistry of the flow being treated, and other factors contributed to the fluctuating test results. At one point the power was off because Gold King hadn't paid its utility bill, but Fearn brought in a backup generator to keep the plant running. "There were violations, technically, but there were reasons for them," he says.

Hennis considered the failure to comply with the discharge permit a violation of Gold King's lease, and last fall he went back to court with another eviction action. He also met with Mark Pifher, then-director of WQCD, to register his frustration with the division's lack of action on the violations piling up at the treatment plant. "He signed the cease-and-desist order right in front of me, which surprised the hell out of me," Hennis says.

Gold King was ordered to stop violating the state's Water Quality Control Act and to bring in an outside expert to evaluate the plant operation. In November, a judge granted

Hennis's eviction action; without access to the settling ponds, the plant was shut down, and the untreated water began to flow directly into Cement Creek, prompting another cease-and-desist order.

He insists the continuing discharge is "not an issue for water quality in the basin." The bulkheads Sunnyside installed reduced the flow in the American Tunnel from 2,000 gallons per minute to less than a hundred gallons per minute; that's a far cry from the situation that existed at the Sunnyside twenty years ago, when the mine emptied 100 pounds of zinc a day into the watershed. The remaining seepage consists of groundwater, Fearn says, with a chemistry similar to that of Cement Creek itself, which is already high in zinc and low in pH -- as acidic as a can of Pepsi, and devoid of aquatic life.

According to Johnson, the federal Clean Water Act and the Colorado laws modeled upon it aren't really designed to address problems with mine flows. "The Act was passed in the 1970s, when the issue was industrial plants," she notes. "People could turn off the discharge. It didn't envision mining, where the discharge goes on and on, even after the industrial process is over. We're trying to use tools that were developed to fit a different situation."

As part of the consent decree in the court case, Sunnyside removed mine tailings and took on reclamation tasks at several other old mine sites in the area. The result has been some improvement in water quality for tributaries feeding into the Animas, especially Mineral Creek, and consistently better-than-predicted water quality for the Animas below Silverton, with average zinc and acidity levels lower than they were six years ago.

Up on Cement Creek, though, the picture is more confusing, with reams of conflicting data and puzzling spikes in metal-loading. Readings from last March indicate that the amount of zinc in the creek is almost three times higher than it was three years ago. This spring was wetter than usual in the San Juans, and the heavy runoff may be scouring salts from mines that were dry before, but firm conclusions are hard to come by.

State regulators also don't have much current data on how sealing the Sunnyside has affected flows from nearby mines. Last October, a Division of Minerals and Geology official asked Sunnyside for information on that point; the company has not responded. But while the division would like some answers, particularly regarding the mine pool's impact on the "general hydrologic balance" of the area, the inquiry isn't an urgent one. "Even though we want Sunnyside to address the flow issue, at this point we don't see it as having a significant impact on water quality," Humphries says.

Two years ago, Sunnyside sought to have fourteen acres of un-reclaimed land around the American Tunnel reclassified as an "industrial site" and have its reclamation permit transferred to Gold King Mines. Hennis fought both maneuvers, arguing that the proposal would allow Sunnyside to walk away from a blighted area. He also discovered that part of the land in question belonged to others, including the federal Bureau of Land Management, which was interested in restoring its portion to rangeland. Although the state initially failed to notify the BLM of the proposal, the bureau ultimately objected to the change, and it was denied.

The BLM has since taken a greater interest in the future of the site, providing a grant to San Juan County to explore the legal aspects of operating another water-treatment plant on Cement Creek. The Animas stakeholders' group is keenly interested in the project, and the EPA is providing some technical expertise. "We'd like to get a plant back in operation," says Simon, "not only to treat the American Tunnel flow, but other loaders."

Such a plant could cost anywhere from several hundred thousand to several million dollars to build. Hennis doesn't think the public should have to foot the bill. The rationale for Colorado's supposedly tough reclamation laws and bonding requirements, he notes, is to avoid another bailout like Summitville, the 1992 mine disaster that poisoned the Alamosa River and saddled taxpayers with an estimated \$150 million in cleanup costs when the mine's owner, Galactic Resources, declared bankruptcy.

"The days of the rape-and-run miners are over," Hennis says. "Especially the Canadian companies like Galactic, that felt they could come to Colorado, mine, and leave the whole mess for others to clean up. I would like to see Sunnyside's corporate parent step forward and take some responsibility. I think they should contribute heavily to building a water-treatment plant and operating it."

Stuart Sanderson, president of the Colorado Mining Association, says there's a trend in the industry toward "zero-discharge operations," an effort to avoid long-term water-treatment issues such as those in the Eureka District. His group is seeking "Good Samaritan legislation" that would make it easier for mining companies to voluntarily clean up old abandoned mine sites.

Stuart Sanderson

"There are other reasons why Todd wants to see that area cleaned up," says county treasurer Rich. "Mining claims that are accessible are going through the roof. There's going to be development up there."

Mining is fading into the past in San Juan County. The county historical society recently opened a mining museum in Silverton that features many artifacts from the Sunnyside operation, from the 1880s to the 1980s. But the old mines still make their presence felt -- as environmental burdens, financial headaches, potential real estate.

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